BNSSG Health Community's Traffic Light System
Shared Care Guidance

Section 1: Heading

Trust: North Bristol NHS Trust, University Hospitals Bristol NHS Foundation Trust, Weston Area Healthcare Trust

Specialty / Department: Rheumatology

Drug:D-Penicillamine

Section 2: Treatment schedule

A typical dose regimen is 125-250mg d-penicillamine daily, increasing by 125mg each month to a maximum dose of 500mg daily given as a single morning dosage. If there is no response after a further three months, dose may be increased to 750mg per day.
This should be continued as long as clinically indicated unless there is a serious side effect or the drug becomes ineffective.

Section 3: Monitoring

Pre-treatment assessment: Full blood count, renal function and urine dipstick for protein. This will be done by the rheumatology department.

Monitoring: FBC and urinalysis should then be checked every 2 weeks until dose stable for 3 months and then monthly. Patients should be asked about the presence of rash or oral ulceration at each visit.

D-penicillamine should be withheld and the patient's rheumatologist contacted if any of the following occur. Falling trends may also prompt discussion.

Problem	Action
Abnormal bruising or sore throat WBC $< 3.5 \times 10^9$/L	Stop drug and check FBC immediately
Neutrophils $< 1.8 \times 10^9$/L	Stop drug and recheck weekly until stable
Platelets $< 150 \times 10^9$/L	Discuss with specialist team
Severe rash or oral ulceration	Stop drug
Proteinuria 2+ or more	Check MSU: if infection treat. If sterile and proteinuria persists withhold until discussion with team.

Section 4: Side-effects

Nausea may occur but is usually manageable by taking the medication before bed. Loss of taste, gastrointestinal upset and rash may occur during early treatment and are usually transient or reversible. More serious complications include proteinuria and haematological toxicity (agranulocytosis, thrombocytopaenia), nephrotic syndrome and induction of autoimmune syndromes such as SLE, myasthenia and polymyositis.

Section 5: Drug interactions

D-penicillamine may increase the risk of agranulocytosis when prescribed with clozapine. It may reduce the levels of digoxin. Antacids and iron reduce absorption of d-penicillamine and should not be taken at the same time of day.

Section 6: Cautions and special recommendations

Cautions:
Renal impairment or concomitant nephrotoxic drugs including gold (Caution if eGFR<50. If eGFR 20-50: avoid if possible or reduce dose. 125mg for first 12 weeks. Increase by same amount every 12 weeks; eGFR<20: avoid as nephrotoxic)

Date approved: xx/xx/xxx

Date to be reviewed: xx/xx/xxxx

Contra-indications:
SLE
Moderate to severe renal impairment (see above)
Pregnancy and lactation
Hypersensitivity to d-penicillamine

Chicken pox/shingles infection - stop and commence aciclovir.

Patients should avoid contact with people who have active chickenpox or shingles and report any contact to their GP and hospital specialist. If immunosuppressed patients are exposed to chickenpox or shingles, they will need to be assessed for susceptibility and the need for aciclovir post exposure prophylaxis, see: UKHSA guidance: Guidelines on post-exposure prophylaxis (PEP) for varicella/shingles (https://www.gov.uk/government/publications/post-exposure-prophylaxis-for-chickenpox-and-shingles) and the Green Book Chapter 34 (https://www.gov.uk/government/publications/varicella-the-green-book-chapter-34).

Section 7: Advice to the patient

1. Discuss potential benefits and side-effects of treatment with the Specialist and/or GP.
2. Share any concerns they have in relation to their treatment.
3. To report any side-effects to the Specialist and/or GP (see individual drug fact sheet for specific information).
4. To ensure that the patient held record is presented at every consultation (in primary or secondary care).
5. To agree to and attend for the monitoring of therapy (including having blood tests carried out at agreed intervals) and assessment of outcomes, to assist health professionals to provide safe, appropriate treatment.
6. To use adequate contraception (both male and females), report any suspected pregnancy to the GP and/or Specialist and inform Specialist in a timely manner if any plans to conceive.
7. To inform GP/Specialist/pharmacist of all medicines (including OTC preparations) that they are currently taking.

Section 8: Responsibilities for Secondary Care

1. Confirm diagnosis and indication for drug treatment.
2. Discuss potential benefits and side-effects of treatment with patient.
3. Carry out baseline monitoring requirements and initiate therapy. The GP will receive copies of the baseline blood test results.
4. In the majority of patients the specialist will advise the GP of any dose adjustments required. The GP will then take over prescribing and blood test monitoring responsibilities.
5. In the majority of patients an initial prescription will be provided by the specialist for up to 3 months.
6. The specialist will advise on the appropriate monitoring blood tests as well as frequency.
7. Monitor the patient's response to therapy.
8. Decide when to stop therapy on safety grounds and inform the GP.
9. The specialist will provide the GP with a paper copy of the concise drug information sheet, plus make the web links readily available for this and the shared care guidelines.
10. The specialist will supply the patient with a 'patient held record' and explain its role.
11. Blood test results and dosage adjustments will be recorded in the patient held record and hospital medical record.
12. The dosage regimen should be clearly explained to the patient.
13. The patient should be asked to report side-effects (see individual drug fact sheet for specific information) and the GP should be informed if any develop. Serious side-effects should be reported to the CHM.

Section 9: Responsibilities for Primary Care

1. Take on shared care proposal from the specialist to monitor and prescribe after the patient has been commenced on treatment. (The time from commencing treatment to agreeing shared care will vary between practices depending on prior agreement with the practices with the local rheumatology department and the practice ability and capacity to safely treat and monitor patients. Some practices may be unable to take on shared care until patient is stabilised on therapy)
2. If shared prescribing is declined, explain to the specialist in writing (fax preferred), the reason for this, copying in the pharmacy lead for the PCT/CCG.
3. To ensure that all relevant staff and patients are aware of the shared care arrangements. Blood test results, dosage adjustments, should be recorded in the patient held record and GP medical record. Any dosage adjustments should also be recorded in computer-based prescribing systems.
4. The dosage regimen should be clearly explained to the patient.
5. Contact the specialist to discuss any significant changes in the blood test results or patient's condition e.g. the medication becomes less effective.
6. Respond to dosage changes advised and prescribe appropriately. Receive copies of any blood test results carried out in secondary care for information and record in patient's record appropriately.
7. Monitor the patient for any side-effects to therapy and refer back to the Specialist should any serious side-effect occur. Side-effects / discontinuation of medication should be documented in the patient held record.

Section 10: Contact details

Name	Organisation	Telephone number	Fax number	E-mail address	Availability
Rheumatology Telephone Advice Line	University Hospitals of Bristol Foundation Trust, BRI	0117 3424881	0117 3423841		Mon – Thu 9am to 5pm Fri 9am to 1pm
Consultant secretary as per clinic letter OR Rheumatology Telephone Advice Line	North Bristol Trust, Southmead / Frenchay	(Advice line) 0117 3233528	0117 323 5827		Mon-Fri 9am -5pm
Rheumatology Telephone Advice Line	Weston Area Healthcare Trust, Weston General Hospital	(Advice line) 01934 881075 01934 636363 (Bleep 279 if urgent)	01934 647025		Mon-Fri 9am -5pm
On-call service		Out of hours Rheumatology service available via Southmead switchboard - ask for Severn Ward and staff on ward will provide on-call doctor's number			

Section 11: Document details

Date prepared:	September 2012
Prepared by:	Collated and updated from previous guidelines by Dr Matt Roy and Dr Lynsey Clarke on behalf of Bristol and Weston Rheumatology consultants Change to information about PEP for varicella/shingles February 2023 added by BNSSG Formulary Team.

Date for review:	Usually 2 years from date of publication unless there are significant changes before that date.
Document identification:	

Section 12: Collaboration

This document has been sent to rheumatology consultants across Bristol and Weston for comment and approval.

Section 13: References

K. Chakravarty, H. McDonald, et al. BSR/BHPR guideline for disease-modifying anti-rheumatic drug (DMARD) therapy in consultation with the British Association of Dermatologists. Rheumatology. 2008; 47(6): 924-5
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